

Pulse Rate Sample Data

68 76 84 80 76

72 60 68 68 80

68 80 64 64 72

76 72 68 56 88

80 76 68 56 64

60 92 72 84 72

Pennies Sample Data

1977	1980	1982	1984
1986	1986	1988	1989
1991	1991	1993	1994
1994	1996	1997	1997
1998	1998	1998	1999
1999	2001	2002	2003
2005	2006		

Mean

The mean is the sum of the data values divided by the number of data items. The result is often called the average.

Median

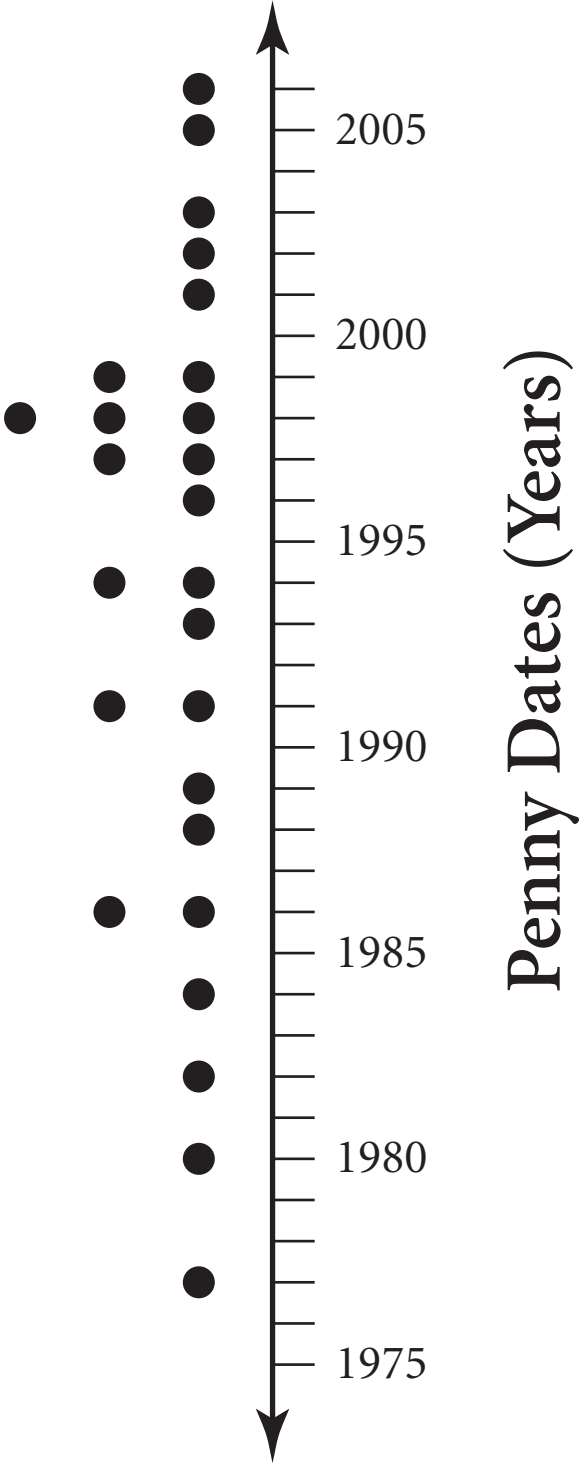
For an odd number of data items, the median is the middle value when the data values are listed in order. If there is an even number of data items, then the median is the average of the two middle values.

Mode

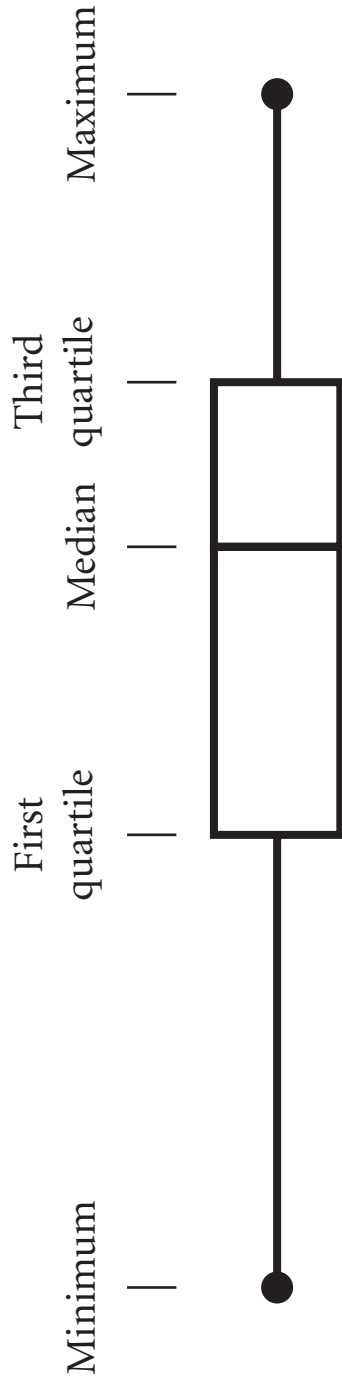
The mode is the data value that occurs most often. Data sets can have two modes (bimodal) or more. Some data sets have no mode.

Dot Plot for Pennies

Name _____ Period _____ Date _____



Box Plot for Pennies



Hand-Span Sample Data

20	22.5	21	19.5
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23	20.5	22	19.5
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19	21	19	19
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21	20.5	21	21.5
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20.5	21.5	19.5	20
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18	18.5	20	21.5
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21	20		
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Lab Report

Include the names of all group members, with your name listed first. In Section I, describe both the topic you investigated and the mathematics that you used. In Section II, record the complete set of data. (You can use a computer to print out long data sets from your calculator.) In Section III, provide any graphs of your data that you have made. In Sections IV and V, show your work for all calculations and your conclusions. If you run across anything unusual, make a note of it. It's important to include labels and units throughout the lab report. Be clear and succinct in your descriptions and your conclusions.

Name Your name, Group names Period Date

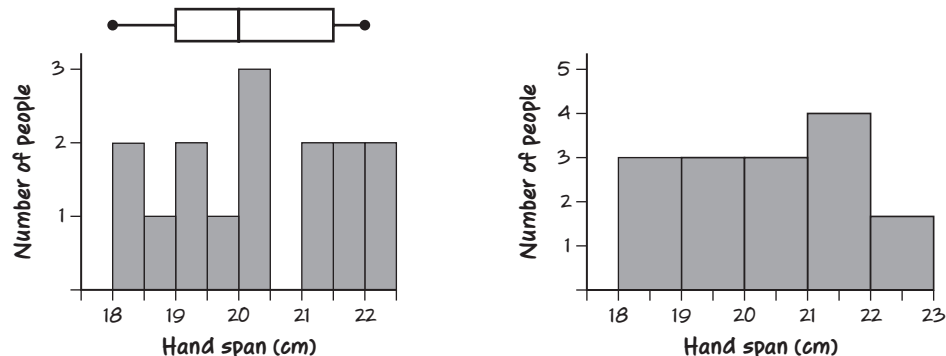
I. Overview

We measured the hand spans of 15 students in centimeters. We made a data table to summarize our observations, and we found the five-number summary of our data. We created two different histograms and a boxplot to display the data.

II. Data Table

Student #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Hand span (cm)	19	20	20	18	22	19	21.5	18	18.5	20	21	21.5	22	19.5	21

III. Graph(s)



IV. Equations, calculations, and formulas

To find the five-number summary, we listed the data in order from small to large:

18, 18, 18.5, 19, 19, 19.5, 20, 20, 20, 21, 21, 21.5, 21.5, 22, 22.

minimum: 18, Q1: 19, median: 20, Q3: 21.5, maximum: 22.

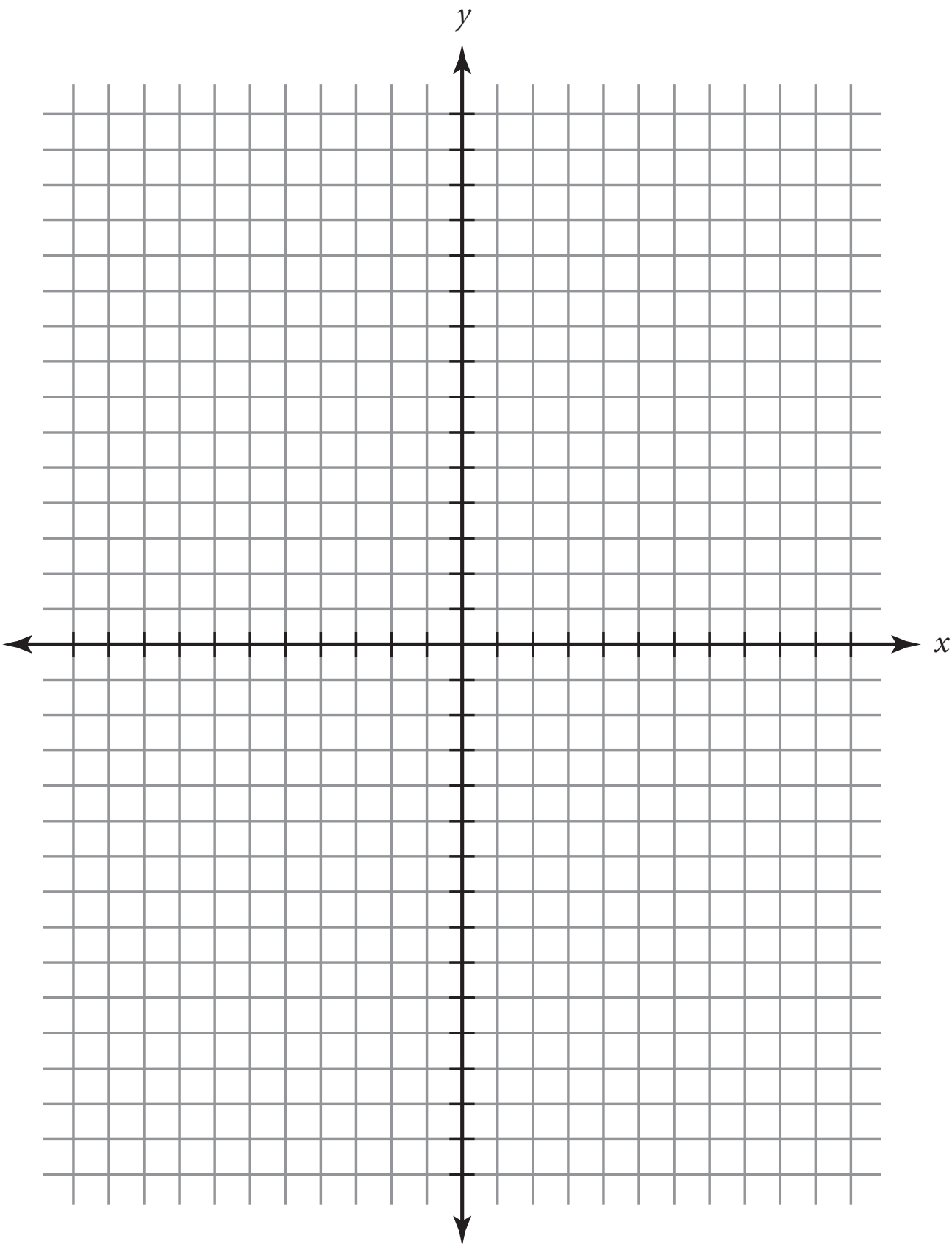
The mean is 20.7 (we added all the numbers and divided by 15).

The mode is 20, because that is the most common hand-span measure in the data.

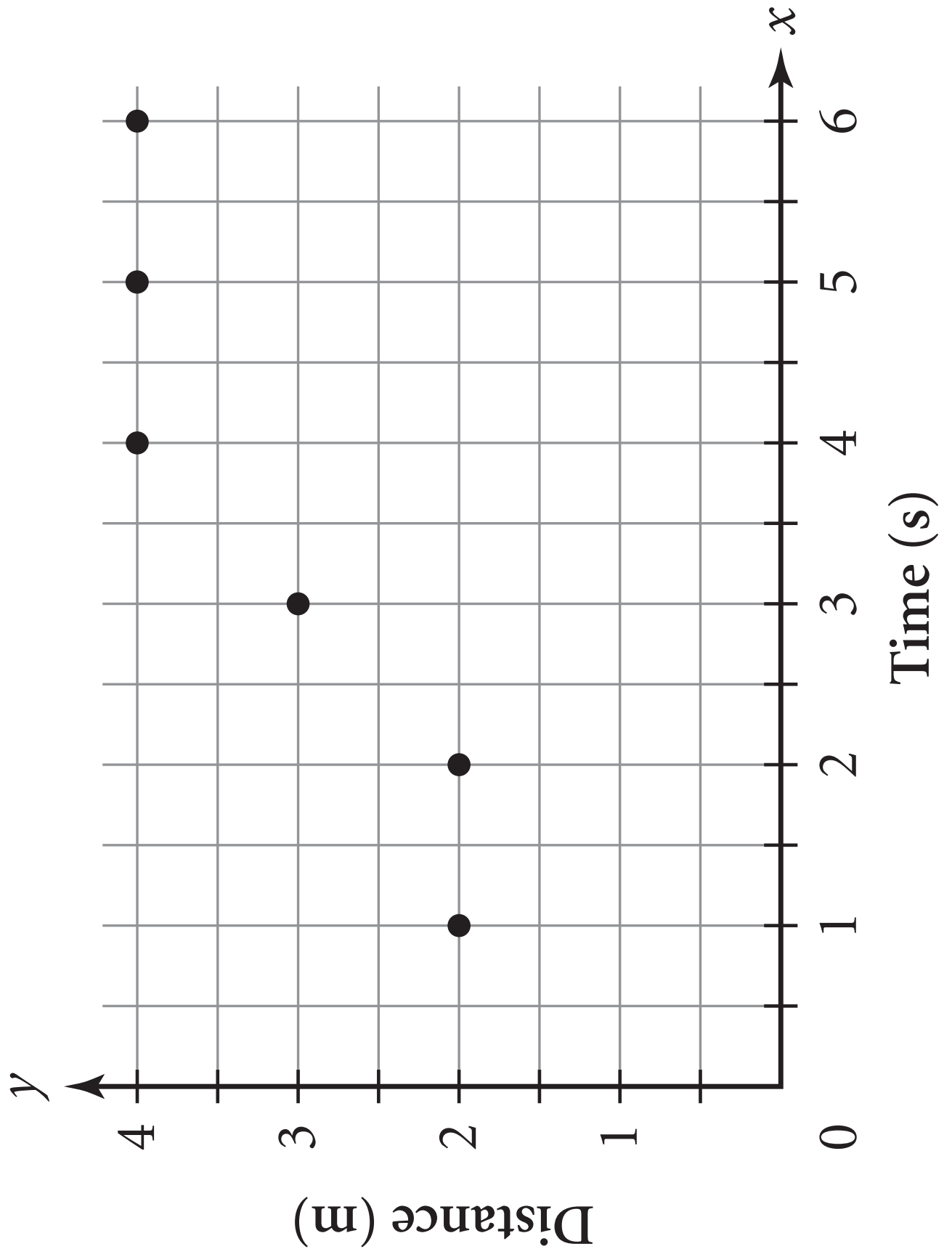
V. Conclusions

We found that the box plot clearly shows the five-number summary of the data. The histogram with a bin width of 0.5 made it easy to see the mode and to see that no students had a hand span of 20.5. The bin width of 0.5 was better for this data set because the histogram with a bin width of 1 did not show the missing value of 20.5. The mean, median, and mode are all pretty similar for our data set. Because we only interviewed 15 people, the shapes of our histograms do not reveal much information.

Coordinate Plane



Distance from a Motion Sensor



Estimation Investigation: Age at Death

Name _____ Period _____ Date _____

Name	Estimated age (yr)	Actual age (yr)
John Lennon		40
Richard Nixon		81
Princess Diana		36
Dr. Benjamin Spock		94
Martin Luther King, Jr.		39
Marilyn Monroe		36
Frank Sinatra		82
James Michener		90
Linda McCartney		56
Ryan White		18
Lou Gehrig		37
Gilda Radner		42
Su Shueh-lin		104
Florence Griffith Joyner		38
James Dean		24
Agnes Gonxha Bojaxhiu (Mother Teresa)		87
Mourning Dove		48
César Chávez		66
El Hajj Malik al-Shabazz (Malcolm X)		39
Ella Maria Gonzales Alvarez		93
Akira Kurosawa		88
Nizar Qabbani		75
Michael Hedges		43
Marie-Louise van Franz		83
Tom Bradley		80
Wilma Randolph		54

Estimation Investigation: Average Gestation Period

Name _____ Period _____ Date _____

Species	Estimated gestation (days)	Actual gestation (days)
Asian elephant		645
Lion		100
Domestic cat		63
Meadow mouse		21
Leopard		98
Guinea pig		68
Cow		284
Polar bear		240
Domestic rabbit		31
Domestic pig		112
White rhinoceros		480
Gorilla		258
Human		280
Giraffe		457
Chipmunk		31

(The World Almanac and Book of Facts 2004, p. 179)

Estimation Investigation: Maximum Speed

Name _____ Period _____ Date _____

Species	Estimated speed (mi/h over quarter mile)	Actual speed (mi/h)
Cheetah		70
Lion		50
Reindeer		32
Human		28
Domestic rabbit		35
Chicken		9
Zebra		40
Pig		11
Greyhound		39
Domestic cat		30
Grizzly bear		30
Wild turkey		15
Quarter horse		47.5
Three-toed sloth		0.15
Garden snail		0.03
Gray fox		42
Spider		1.17

(Natural History magazine, in *The World Almanac and Book of Facts 2004*, p. 179)

Large-Item Prices

	Pizza Palace	Tony's Pizzeria
Large pizza	\$11.40	\$11.35
Large salad	\$3.35	\$3.90
Large drink	\$2.15	\$2.10